

**Remarks**

Applicants have canceled claims 1-18 and added new claims 19-112. Support for the added claims is found in the specification and claims as filed. No new matter is introduced.

Support for independent claims 19, 37, 50, and 68 can be found, for example, at: page 14, lines 14-18 (immunostimulatory nucleic acid molecule); page 15, lines 11-13 (stimulate an immune response in a subject); page 8, lines 8-12 (treat, prevent or ameliorate), page 13, lines 6-10 and 33-35 (infection with a *Mycobacterium* bacterium); and page 14, line 15 (unmethylated cyosine, guanine dinucleotide sequence).

Support for independent claims 81, 90, 97, and 106 can be found, for example, at: page 8, lines 9-12 (methods for treating, preventing or ameliorating a bacterial infection in a subject); page 13, lines 33-35 (infectious bacteria include *Mycobacteria* species); page 40, lines 9-11 (can be administered to a subject to treat an “immune system deficiency”); page 13, lines 6-10 (an “immune system deficiency” is a disease or disorder in which it would be useful to boost a subject’s imune response to eliminate an infection in the subject); page 42, lines 28-29 (effective amount); and page 14, lines 14-18 and throughout (immunostimulatory sequence comprising 5' CpG 3').

Support for claims 20 and 51 can be found, for example, at page 14, lines 14-15, and page 15, lines 24-28 (immunostimulatory oligodeoxyribonucleotide).

Support for claims 21 and 52 can be found, for example, at page 22, line 35 – page 24, line 3; page 44, lines 11-17; page 46, lines 9-12; and page 50, lines 20-24 (purified bacterial DNA).

Support for claims 22, 23, 53, and 54 can be found, for example, at page 7, line 37 – page 8, line 1; page 14, lines 34-36; and page 17, lines 18-22 (plasmid DNA).

Support for claims 24, 38, 55, and 69 can be found, for example, at page 18, line 37 – page 19, line 1, and page 24, line 12 (CpG motif composed of an unmethylated CpG flanked by two 5' purines and two 3' pyrimidines).

Support for claims 25, 39, 56, and 70 can be found, for example, at page 33, lines 16-18 (CpG motif in which the CpG is flanked by a 5' GpT dinucleotide and two 3' pyrimidines).

Support for claims 26, 40, 57, and 71 can be found, for example, at page 7, lines 28-31 (a CpG motif represented by 5' X<sub>1</sub>X<sub>2</sub>CGX<sub>3</sub>X<sub>4</sub> 3' wherein C and G are unmethylated, and X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub> and X<sub>4</sub> are nucleotides).

Support for claims 27-29, 41-43, 58-60, and 72-74 can be found, for example, at page 7, lines 28-35.

Support for sequences in claims 30, 31, 44, 45, 61, 62, 75, 76, 84, 85, 92, 93, 100, 101, 108, and 109 can be found, for example, at:

page 7, lines 23-35 (AACGCC);

SEQ ID NOs: 23, 24, 25, 28, and 30 (AACGCT);

SEQ ID NO: 5 (AACGTC);

SEQ ID NOs: 3, 12, 22, and 45 (AACGTT);

page 7, lines 23-35 (AGCGCC);

page 7, lines 23-35 (AGCGCT);

page 7, lines 23-35 (AGCGTC);

SEQ ID NOs: 17, 18, and 21 (AGCGTT);

page 7, lines 23-35 (GACGCC);

page 7, lines 23-35 (GACGCT);

SEQ ID NO: 46 (GACGTC);

SEQ ID NOs: 6, 7, 9, 10, 13, 16, 35, 44, 48, 51, and 54 (GACGTT);

page 7, lines 23-35 (GGCGCC);

page 7, lines 23-35 (GGCGCT);

page 7, lines 23-35 (GGCGTC);

page 7, lines 23-35 (GGCGTT);

page 7, lines 23-35 (ATCGCC);

page 7, lines 23-35 (ATCGCT);

page 7, lines 23-35 (ATCGTC);

page 7, lines 23-35 (ATCGTT);  
page 7, lines 23-35 (GTCGCC);  
SEQ ID NO: 42 (GTCGCT);  
page 7, lines 23-35 (GTCGTC);  
SEQ ID NO: 43 (GTCGTT); and  
SEQ ID NOs: 24 and 25 (AACGCTCG).

Support for claims 32-34, 46, 47, 63-65, 77, and 78 can be found, for example, at page 13, lines 8-10 and 33-34.

Support for claims 35, 36, 48, 49, 66, 67, 79, and 80 can be found, for example, at page 8, lines 10-12; page 13, lines 6-10; and page 40, lines 9-11 (subject has an immune system deficiency; subject's immune system is not functioning normally).

Support for claims 82 and 98 can be found, for example, at: page 14, lines 33-34 (immunostimulatory oligonucleotide); page 46, lines 20-21, and page 50, lines 23-24 (lipopolysaccharide (LPS) level in *E. coli* DNA less than 2.5 ng/mg of DNA); and page 14, lines 34-35 (plasmid DNA).

Support for sequences in claims 83, 91, 99, and 107 can be found, for example, at:  
SEQ ID NOs: 3, 5, 6, 7, 9, 10, 12, 13, 16, 17, 18, 21, 22, 23, 24, 25, 28, 30, 35, 44, 45, 46, 48, 51, and 54 (5'-Purine-Purine-C-G-Pyrimidine-Pyrimidine-3');  
SEQ ID NOs: 42, 43, and 53 (5'-Purine-TCG-Pyrimidine-Pyrimidine-3');  
SEQ ID NOs: 2, 5, 18, 21, 24, 25, 31, 34, 36, 37, 41, 42, and 43 (5'-(TCG)<sub>n</sub>-3', where n is any integer that is at least 1); and  
SEQ ID NOs: 24 and 25 (5'-Purine-Purine-CG-Pyrimidine-Pyrimidine-CG-3').

Support for claims 86 and 102 can be found, for example, at: page 10, lines 6-11 (promote development of cytotoxic lymphocyte response); page 35, line 30 – page 36, line 9 (induce antigen-specific response); page 40, lines 21-23 (use in conjunction with a vaccine to effect a better response from the vaccine).

Support for claims 87, 94, 103, and 110 can be found, for example, at page 13, line 34 (*Mycobacterium tuberculosis*).

Support for claims 88, 95, 104, and 111 can be found, for example, at page 13, line 34 (*Mycobacterium avium*).

Support for claims 89, 96, 105, and 112 can be found, for example, at page 40, lines 9-11 (can be administered to a subject to treat an “immune system deficiency”).

Pursuant to 37 C.F.R. § 1.607(a), Applicants seek to have an interference declared with U.S. Pat. No. 6,552,006 (Raz et al.), issued April 22, 2003, on application serial no. 09/774,403, filed January 30, 2001. Applicants seek to have an interference declared with U.S. Pat. No. 6,552,006 (Raz et al.) because the subject matter claimed in U.S. Pat. No. 6,552,006 (Raz et al.) was invented by Applicants as is disclosed in one or more of the applications to which this application claims priority, such as the application now issued as U.S. Pat. No. 6,207,646.

Applicants propose a count for an interference as follows:

Proposed Count 1

Claim 12 of U.S. Pat. No. 6,552,006

or

Claim 25 of U.S. Pat. No. 6,552,006

or

Claim 19 of this application

or

Claim 37 of this application

or

Claim 50 of this application

or

Claim 68 of this application

or

Claim 81 of this application

or

Claim 90 of this application

or

Claim 97 of this application

or

Claim 106 of this application.

Claims 19-112 presented above correspond to the Proposed Count 1. Claims 12-17, 21-23, and 25-31 of U.S. Pat. No. 6,552,006 correspond to Proposed Count 1.

Claims 19-112 added in this preliminary amendment correspond to and were substantially copied from the claims of U.S. Pat. No. 6,552,006 as follows:

Claims of U.S. Pat. No. 6,552,006	Claims added herewith
12, 25	19, 37, 50, 68, 81, 90, 97, 106
13	20-23, 51-54, 82, 98
14, 26	24-29, 38-43, 55-60, 69-74, 83, 91, 99, 107
15, 27	30, 44, 61, 75, 84, 92, 100, 108
16, 28	31, 45, 62, 76, 85, 93, 101, 109
17	32, 63, 86, 102
21, 29	33, 46, 64, 77, 87, 94, 103, 110
22, 30	34, 47, 65, 78, 88, 95, 104, 111
23, 31	35, 36, 48, 49, 66, 67, 79, 80, 89, 96, 105, 112

Applicants wish to bring to the attention of the examiner that the disclosure on which the added claims are based was first filed on October 30, 1996, and was issued as U.S. Pat. No. 6,207,646 on March 27, 2001.

**Summary**

Claims 1-18 are cancelled by this amendment and new claims 19-112 are presented.  
Pursuant to 37 C.F.R. § 1.607(a), Applicants seek to have an interference declared with U.S.  
Pat. No. 6,552,006 (Raz et al.).

Respectfully submitted,



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